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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 12

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Complete if Known

		Application Number	09/866,067	TECH CENTER 1600
		Filing Date	May 23, 2001	SEP 3 7 2001
		First Named Inventor	Meade et al.	
		Group Art Unit	Not Yet Assigned	
		Examiner Name	Not Yet Assigned	
		Attorney Docket Number	A-58762-20/RFT/RMS/RMK	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	1	4,704,193		Bowers et al.	11/1987	
	2	4,707,352		Stavrianopoulos	11/1987	
	3	4,707,440		Stavrianopoulos	11/1987	
	4	4,711,955		Ward et al.	12/1987	
	5	4,755,458		Rabbani et al.	7/1988	
	6	4,787,963		MacConnell	11/1998	
	7	4,840,893		Hill et al.	6/1989	
	8	4,849,513		Smith et al.	7/1989	
	9	4,868,103		Stavrianopoulos et al.	9/1989	
	10	4,894,325		Englehardt et al.	1/1990	
	11	4,943,523		Stavrianopoulos	7/1990	
	12	4,945,045		Forrest et al.	07/1990	
	13	4,952,685		Stavrianopoulos	8/1990	
	14	4,994,373		Stavrianopoulos	2/1991	
	15	5,002,885		Stavrianopoulos	3/1991	
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	17	5,082,830		Brakel et al.	1/1992	

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Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office ³	Number ⁴				
	18	EP	0 234 938	A2	Cranfield Inst. of Tech.	2/1987	
	19	EP	0 229 943	B1	Molecular Biosystems Inc.	7/1987	
	20	EP	0 599 337	A2	Canon Kabushiki Kaisha	1/1994	
	21	EP	0 063 879	A2	Yale University	11/1982	
	22	EP	0 515 615		Boehringer Nannheim	9/1996	
	23	CA	2 090 904	A1	F. Hoffman-La Roche	9/1993	
	24	JP	238,166	A	Mitsubishi Corp.	1988	abstract
	25	JP	6-41183	A2	Mitsubishi Corp.	1994	

Examiner Signature	<i>Abu</i>	Date Considered	<i>12/15/2001</i>
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Sheet 2 of 12

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Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

U.S. PATENT DOCUMENTS

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		Number	Kind Code ² (if known)			
W	26	5,089,112		Skotheim et al.	02/1992	_____
	27	5,175,269		Stavrianopoulos	12/1992	_____
	28	5,180,968		Bruckenstein et al.	01/1993	_____
	29	5,241,060		Englehardt et al.	8/1993	_____
	30	5,242,828		bergstrom et al.	09/1993	_____
	31	5,278,043		Bannwarth et al.	1/1995	_____
	32	5,312,527		Mikkelsen et al.	5/1994	_____
	33	5,328,824		Ward et al.	7/1994	_____
	34	5,356,786		Heller et al.	10/1994	_____
	35	5,391,272		O'Daly et al.	02/1995	_____
	36	5,403,451		Riviello et al.	4/1995	_____
	37	5,436,161		Bergstrom et al.	07/1995	_____
	38	5,443,701		Willner et al.	08/1995	_____
	39	5,449,767		Ward et al.	9/1995	_____
	40	5,472,881		Beebe et al.	12/1995	_____
	41	5,476,928		Ward et al.	12/1995	_____
▼	42	5,552,270		Khrapko et al.	9/1996	_____

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Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴ (if known)				
W	43	WO	86/05815	A1	Genentics International Inc.	03/1985	_____
	44	WO	90/05732	A1	Columbia Univ.	5/1990	_____
	45	WO	92/10757	A1	Boehringer Mannheim	6/1992	_____
	46	WO	93/22678	A2	Mass Inst. of Tech.	11/1993	_____
	47	WO	93/10267	A1	IGEN, Inc.	5/1993	_____
	48	WO	94/22889	A1	Cis Bio International	10/1994	_____
	49	WO	95/15971	A2	Calif. Inst. of Technology	6/1995	_____
▼	50	WO	96/40712	A1	Calif. Inst. of Technology	12/1996	_____

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STATEMENT BY APPLICANT

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Project 3 of 12

Complete if Known

Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Mead et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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		Number	Kind Code ² (if known)			
u	51	5,565,552		Magda et al.	10/1996	
	52	5,571,568		Ribi et al.	11/1996	
	53	5,573,906		Bannwarth et al.	11/1996	
	54	5,591,578		Meade et al.	1/1997	
	55	5,595,908		Fawcett et al.	1/1997	
	56	5,601,982		Sargent et al.	2/1997	
	57	5,620,850		Bamdad et al.	4/1997	
	58	5,632,957		Heller et al.	05/1997	
	59	5,700,667		Marblic et al.	12/1997	
	60	5,705,348		Meade et al.	1/1998	
	61	5,741,700		Ershov et al.	4/1998	
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	67	5,795,453		Gilmartin et al.	08/1998	

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		Office ³	Number ⁴				
u	68	WO	97/01646	A2	Univ. of N. Carolina	1/1997	
	69	WO	97/31256	A3	Cornell Res. Foundation	08/1997	
	70	WO	97/44651	A1	AU Membrane and	11/1997	
	71	WO	97/27329	A1	Univ. of Chicago	7/1997	
	72	WO	97/41425	A1	Univ. of Alberta	11/1997	
	73	WO	98/20162	A2	Clinical Micro Systems	5/1998	
	74	WO	98/27229	A1	Univ. of Chicago	6/1998	
	75	WO	98/28444	A2	Univ. of Chicago	7/1998	
	76	WO	98/35232	A2	Univ. of N. Carolina	8/1998	
	77	WO	98/51823	A1	Mosaic Technology	11/1998	

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**INFORMATION DISCLOSURE
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Sheet

of 12

Complete if Known	
Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meadc et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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SPT 07 2001

U.S. PATENT DOCUMENTS

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		Number	Kind Code ² (if known)			
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93	6,238,870			Meade et al.	05/2001	
93a	5,705,346			Okamoto et al.	01/1998	
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FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴	Kind Code ² (if known)			
94	WO	98/57159	A1	Clinical Micro Systems	6/1997		
95	WO	99/57319	A1	Clinical Micro Systems	11/1999		
96	WO	99/67425	A2	Clinical Micro Systems	12/1999		
97	WO	99/14596	A1	AB Sangtec Medical	3/1999		
98	WO	99/37819	A2	Clinical Micro Systems	07/1999		
98a	WO	99/29711	A1	Nanogen Inc.	06/1999		
					X		

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Rule et al.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 5 of 12

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Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
✓	99	Aizawa et al., "Integrated Molecular Systems for Biosensors," Sensors and Acuators B, B@\$ (Nos 1/3) Part 1:1-5 (March 1995).
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	105	Baum, R. M., "Views on Biological, Long-Range Electron Transfer Stir Debate," <i>C&EN</i> , pp 20-23 (1993).
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	109	Blonder et al., "Three-dimensional Redox-Active layered Composites of Au-Au, Ag-Ag and Au-Ag Colloids," <i>Chem. Commun.</i> , 1393-1394 (1998).
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	111	Boon et al., "Mutation Detection by Electrocatalysis at DNA- Modified Electrodes," <i>Nature Biotechnology</i> , 18: 1096-1100 (October 2000).
	112	Bowler, B. E., et al., "Long-Range Electron Transfer in Donor (Spacer) Acceptor Molecules and Proteins," <i>Progress in Inorganic Chemistry: Bioinorganic Chemistry</i> , 38:259-322 (1990).
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	114	Bumm, et al., "Are Single Molecular Wires Conducting?," <i>Science</i> 271:1705-1707 (1996).
	115	Cantor, C.R. et al., "Report on the Sequencing by Hybridization Workshop," <i>Genomics</i> , 13:1378-1383 (1992).
	116	Carr et al., "Novel Electrochemical Sensors for Neutral Molecules," <i>Chem. Commun.</i> , 1649-1650 (1997).
↓	117	Carter et al., "Voltammetric Studies of the Interaction of Metal Chelates with DNA. 2. Tris-Chelated Complexes of Cobalt(III) and Iron(II) with 10-Phenanthroline and 2,2'-Bipyridine," <i>J. Am. Chem. Soc.</i> , 11:8901-8911 (1989).

Examiner Signature

Meade

Date Considered

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Application Number	09/866,067
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
u	118	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocyanochrome c by Ru(2,2'-bipy) ₂ (im)(His-33) ³⁺ ," <i>J. Am. Chem. Soc.</i> , 113:7056-7057 (1991).	1
	119	Chidsey, et al., "Coadsorption of Ferrocene-Terminated and Unsubstituted Alkanethiols on Gold" Electroactive Self-Assembled Monolayers," <i>J. Am. Chem. Soc.</i> , 112:4301-4306 (1990).	1
	120	Chidsey, C.E.D., et al., "Free Energy and Temperature Dependence of Electron Transfer at the Metal Electrolyte Interface," <i>Science</i> , 251:919-922 (1991).	1
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	122	Clery, "DNA Goes Electric," <i>Science</i> , 267:1270 (1995).	1
	123	Commerce Business Daily Issue of September 26, 1996 PSA#1688.	1
	124	Davis, L. M., et al., "Electron Donor Properties of the Antitumour Drug Amsactine as Studied by Fluorescence Quenching of DNA-Bound	1
	125	Davis, L. M., et al., "Elements of biosensor construction," <i>Enzyme Microb. Technol.</i> 17:1030-1035 (1995).	1
	126	Degani et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 2. Methods for Bonding Electron-Transfer Relays to Glucose Oxidase and D-Amino-Acid Oxidase," <i>J. Am. Chem. Soc.</i> 110:2615-2620 (1988).	1
	127	Degani, Y., et al., "Electrical Communication between Redox Centers of Glucose Oxidase and Electrodes via Electrostatically and Covalently Bound Redox Polymers," <i>J. Am. Chem. Soc.</i> , 111:2357-2358 (1989).	1
	128	Degani, Y., et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 1. Electron Transfer from Glucose Oxidase to Metal Electrodes via Electron Relays, Bound Covalently to the Enzyme," <i>J. Phys. Chem.</i> , 91(6):1285-1288 (1987).	1
	129	Deinhammer, R.S., et al., "Electronchemical Oxidation of Amine-containing compounds: A Route to the Surface Modification of glassy carbon electrodes," <i>Langmuir</i> , 10:1306-1313 (1994).	1
	130	Dreyer, G. B., et al., "Sequence-specific cleavage of single-stranded DNA: Oligodeoxynucleotide-EDTA-Fe(II)," <i>Proc. Natl. Acad. Sci. USA</i> , 82:968-972 (1985).	1
	131	Drobyshev, A. et al., "Sequence Analysis by Hybridization with Oligonucleotide Microchip: Identification of β -thalassemia Mutations," <i>Gene</i> , 188:45-52 (1997).	1
	132	Dubiley, S. et al., "Fractionation, phosphorylation and Ligation on Oligonucleotide Microchips to Enhance Sequencing by Hybridization," <i>Nucleic Acids Research</i> , 25(12):2259-2265 (1997).	1
✓	133	Durham, B., et al., "Electron-Transfer Kinetics of Singly Labeled Ruthenium(II) Polypyridine Cytochrome c Derivatives," <i>Advances in Chemistry Series</i> , 226:181-193 (1990).	1

Examiner Signature

Arleen

Date Considered

12/15/2001

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Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
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W	134	Durham, B., et al., "Photoinduced Electron-Transfer Kinetics of Singly Labeled Ruthenium Bis(bipyridin) Dicarboxybipyridine Cytochrome c Derivatives," <i>Biochemistry</i> , 28:8659-8665 (1989).
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Substitute for form 1449B/PTO, 8-97 INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
SEP 8 4 2001				Application Number	09/866,067
				Filing Date	May 23, 2001
				First Named Inventor	Meade et al.
				Group Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	A-58762-20/RFT/RMS/RMK
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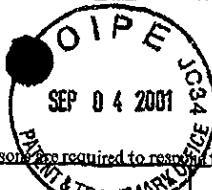
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✓	152	Heller, A., "Electrical Wiring of Redox Enzymes," <i>Acc. Chem. Res.</i> , 23:128-134 (1990).	1
	153	Heller et al., "Fluorescent Energy Transfer Oligonucleotide Probes," <i>Fed. Proc.</i> 46(6):1968 (1987) Abstract No. 248.	1
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✓	169	Lee, et al., "Direct Measurement of the Forces Between Complementary Strands of DNA," <i>Science</i> , 266:771-773 (1994).	1

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Sheet 9 of 12

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Application Number	09/866,067
Filing Date	May 23, 2001
First Named Inventor	Meade et al.
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	A-58762-20/RFT/RMS/RMK

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✓	170	Lenhard, J.R., et al., "Part VII Covalent Bonding of a Reversible- Electrode Reactant to Pt Electrodes Using an organosilane Reagent" <i>J. Electronal. Chem.</i> , 78:195-201 (1977).	1
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	173	Livshits, M. et al., "Theoretical Analysis of the Kinetics of DNA Hybridization with Gel-Immobilized Oligonucleotides," <i>Biophysical Journal</i> , 71:2795-2801 (1996).	1
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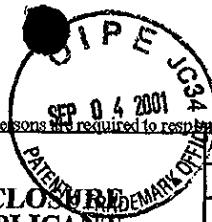
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STATEMENT BY APPLICANT**

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Application Number	09/866,067		
Filing Date	May 23, 2001		
First Named Inventor	Meade et al.		
Group Art Unit	Not Yet Assigned		
Examiner Name	Not Yet Assigned		
Sheet	10	of	12
Attorney Docket Number A-58762-20/RFT/RMS/RMK			

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u	186	Mucic et al., "DNA-Directed Synthesis of Binary Nanoparticle Network Materials," <i>J. Am. Chem. Soc.</i> , 120:12674-12675 (1998).	/
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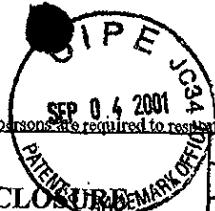
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Sheet 12 of 12 Attorney Docket Number A-58762-20/RFT/RMS/RMK

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Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Complete if Known
<i>m</i>	218	Turro, N., et al. "Photoelectron Transfer Between Molecules Adsorbed in Restricted Spaces," <i>Photochem. Convers. Storage Sol. Energy, Proc. Int. Conf.</i> , 8th, pp 121-139 (1990).	
	219	Uosake, K., et al., "A Self-Assembled Monolayer of Ferrocenylalkane Thiols on Gold as an Electron Mediator for the Reduction of Fe(III)-EDTA in Solution," <i>Electrochimica Acta</i> , 36(11/12):1799-1801 (1991).	
	220	Van Ness, J., et al., "A Versatile Solid Support System for Oligodeoxynucleotide Probe-Based Hybridization Assays," <i>Nucleic Acids Research</i> , 19(12):3345-3350 (1991).	
	221	Velev et al., "In Situ Assembly of Colloidal Particles into Miniaturized Biosensors," <i>The ACS Journal of Surfaces and Colloids, Langmuir</i> , 15(11):3693-3698 (1999).	
	222	Watson et al., "Hybrid Nanoparticles with Block Copolymer Shell Structures," <i>J. Am. Chem. Soc.</i> , 121:462-463 (1999).	
	223	Weber, et al., "Voltammetry of Redox-Active Groups Irreversibly Adsorbed onto Electrodes. Treatment Using the Marcus Relation between Rate and Overpotential," <i>Anal. Chem.</i> , 66:3164-3172 (1994).	
	224	Williams, et al., "Studies of oligonucleotide interactions by hybridisation to arrays: the influence of dangling ends on duplex yield," <i>Nucleic Acids Research</i> , 22(8):1365-1367 (1994).	
	225	Winkler, J. R., et al., "Electron Transfer in Ruthenium-Modified Proteins," <i>Chem. Rev.</i> , 92:369-379 (1992).	
	226	Xu, et al., "Immobilization and Hybridization of DNA on an Aluminum(III) Alkanebisphosphonate Thin Film with Electrogenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 117:2627-2631 (1995).	
	227	Xu, et al., "Immobilization of DNA on an Aluminum(III) alkanebisphosphonate Thin Film with Electrogenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 116:8386-8387 (1994).	
	228	Yang, et al., "Growth and Characterization of Metal(II) Alkanebisphosphonate Multilayer Thin Films on Gold Surfaces," <i>J. Am. Chem. Soc.</i> , 115:11855-11862 (1993).	
	229	Yershov, G. et al., "DNA Analysis and Diagnostics on Oligonucleotide Microchips," <i>Proc. Natl. Acad. Sci. USA</i> , 93:4913-4918 (1996).	
<i>✓</i>	230	Zhou, et al., "Fluorescent Chemosensors Based on Energy Migration in Conjugated Polymers: The Molecular Wire Approach to Increased Sensitivity," <i>J. Am. Chem. Soc.</i> , 117:12593-12602 (1995).	

Examiner Signature	<i>Mike m</i>	Date Considered	12/15/2003
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English Language Translation is attached.

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